

KIC 009579753

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
009579753-01	OBS	7945.01	1.089079	132.015159	96.5	2.641	8.0	7.1	0.61	4327	0.73	388.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009579753-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

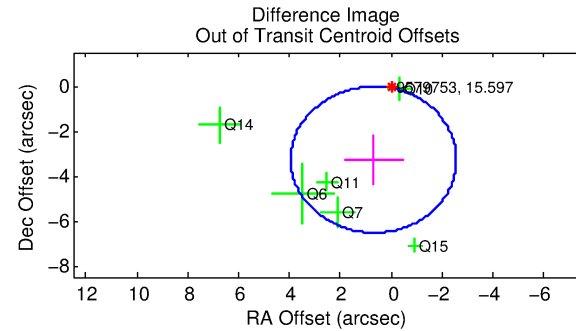
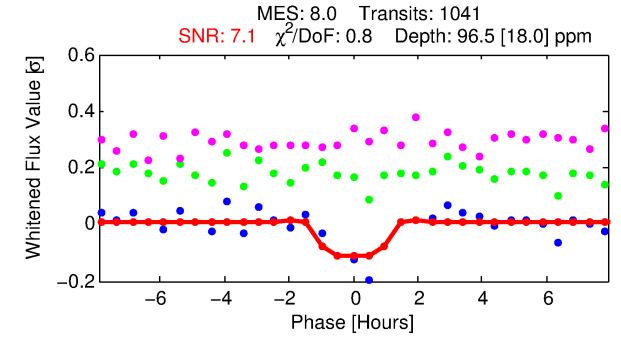
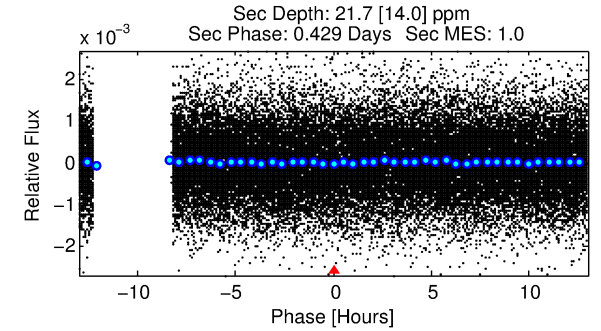
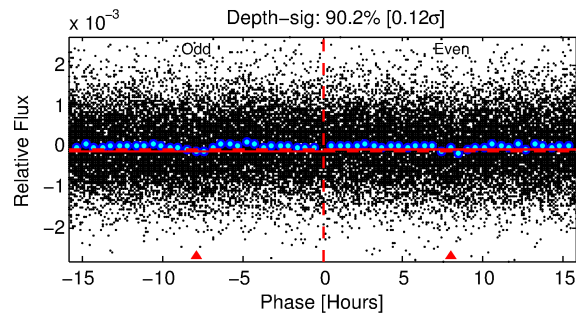
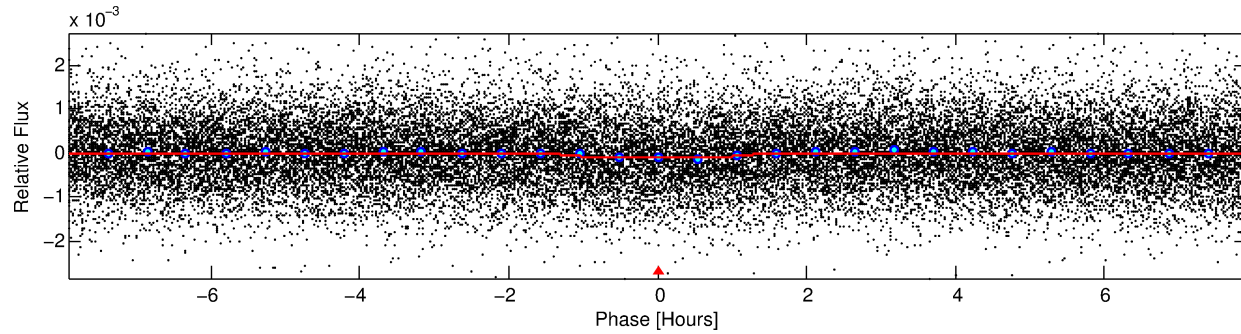
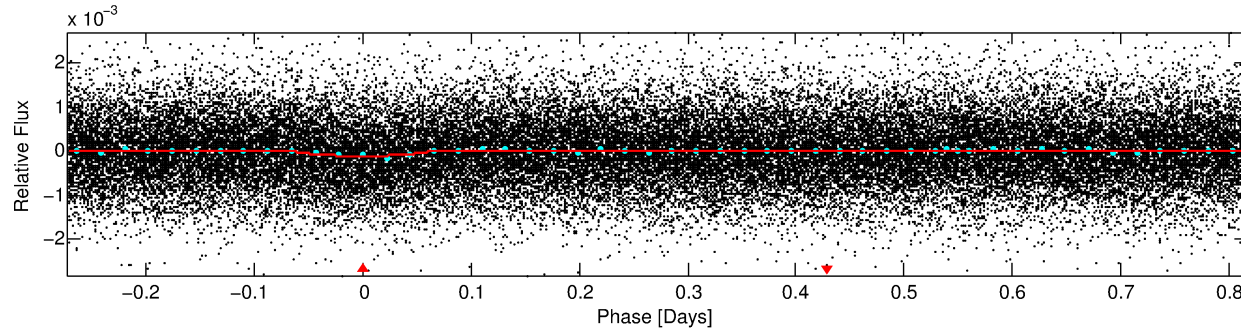
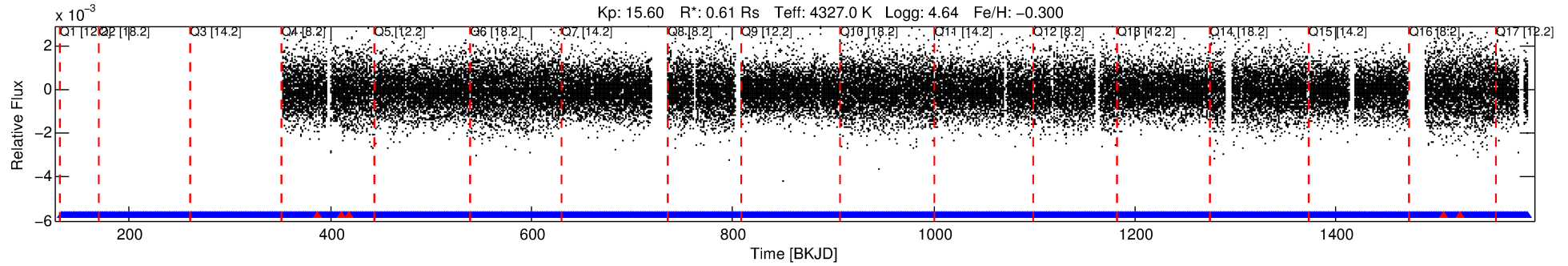
Ephemeris Match Information For 009579753-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009579753-01	9579753	FL-Lyr-pri	9641031	1:2	187.4	4	-47	9.18	15.60	4485.20	Direct-PRF	0	0.32	0.55

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 9579753 Candidate: 1 of 1 Period: 1.089 d



DV Fit Results:

Period = 1.08908 [0.00001] d
Epoch = 132.0152 [0.0043] BKJD
Rp/R* = 0.0110 [0.0119]
a/R* = 1.73 [5.10]
b = 0.90 [0.97]
Seff = 388.16 [75.27]
Teff = 1132 [55] K
Rp = 0.74 [0.80] Re
a = 0.0175 [0.0015] AU
Ag = 6.75 [15.29] [0.38σ]
Teffp = 2820 [1600] K [1.05σ]

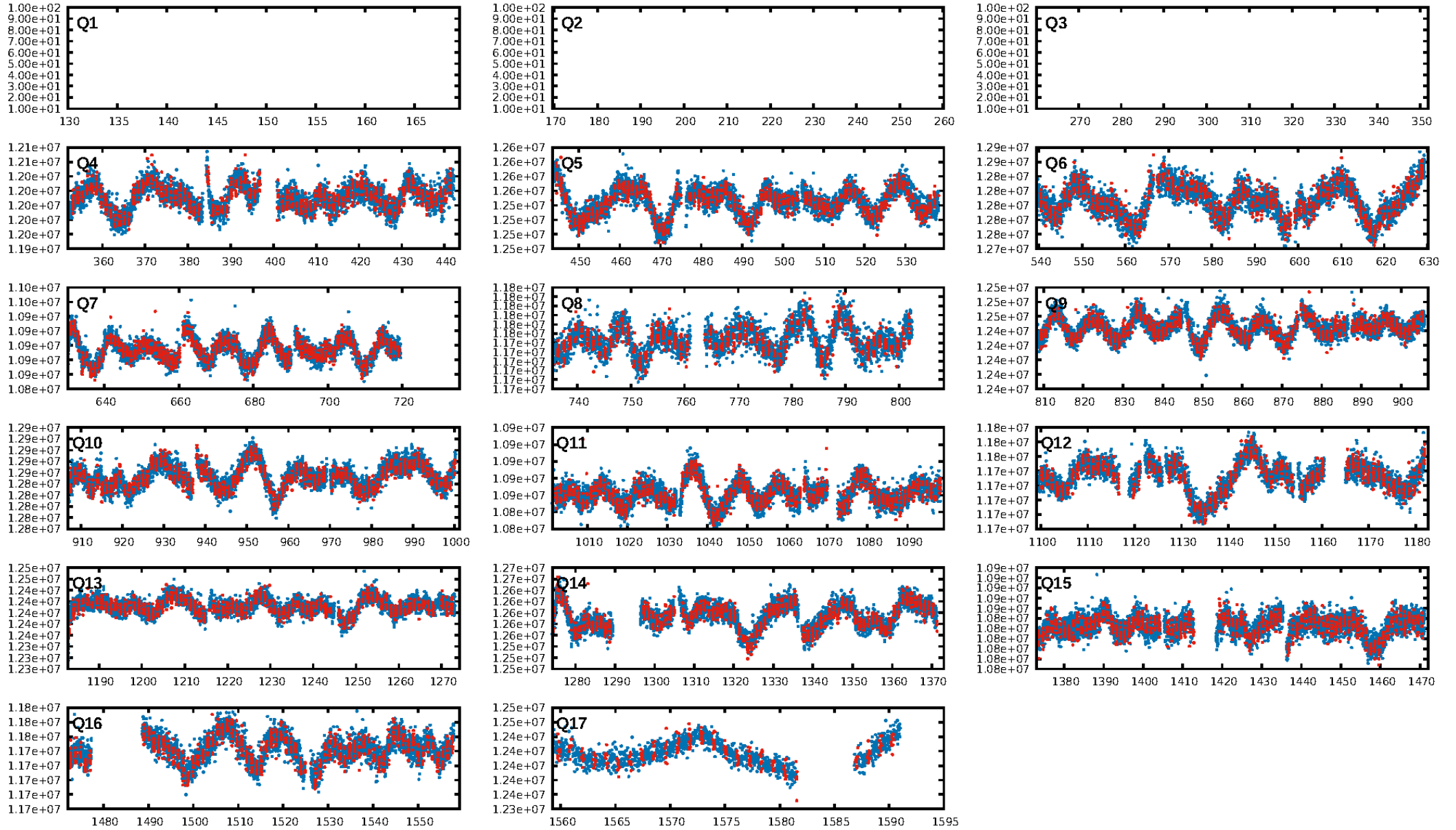
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.56e-15
RollingBand-fgt: 1.00 [1011/1016]
GhostDiagnostic-chr: 0.2927
Centroid-sig: 0.0%
Centroid-so: 1.216 arcsec [4.64σ]
OotOffset-rm: 3.349 arcsec [3.09σ]
KicOffset-rm: 3.759 arcsec [4.35σ]
OotOffset-st: 3/3/0/0 [6]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

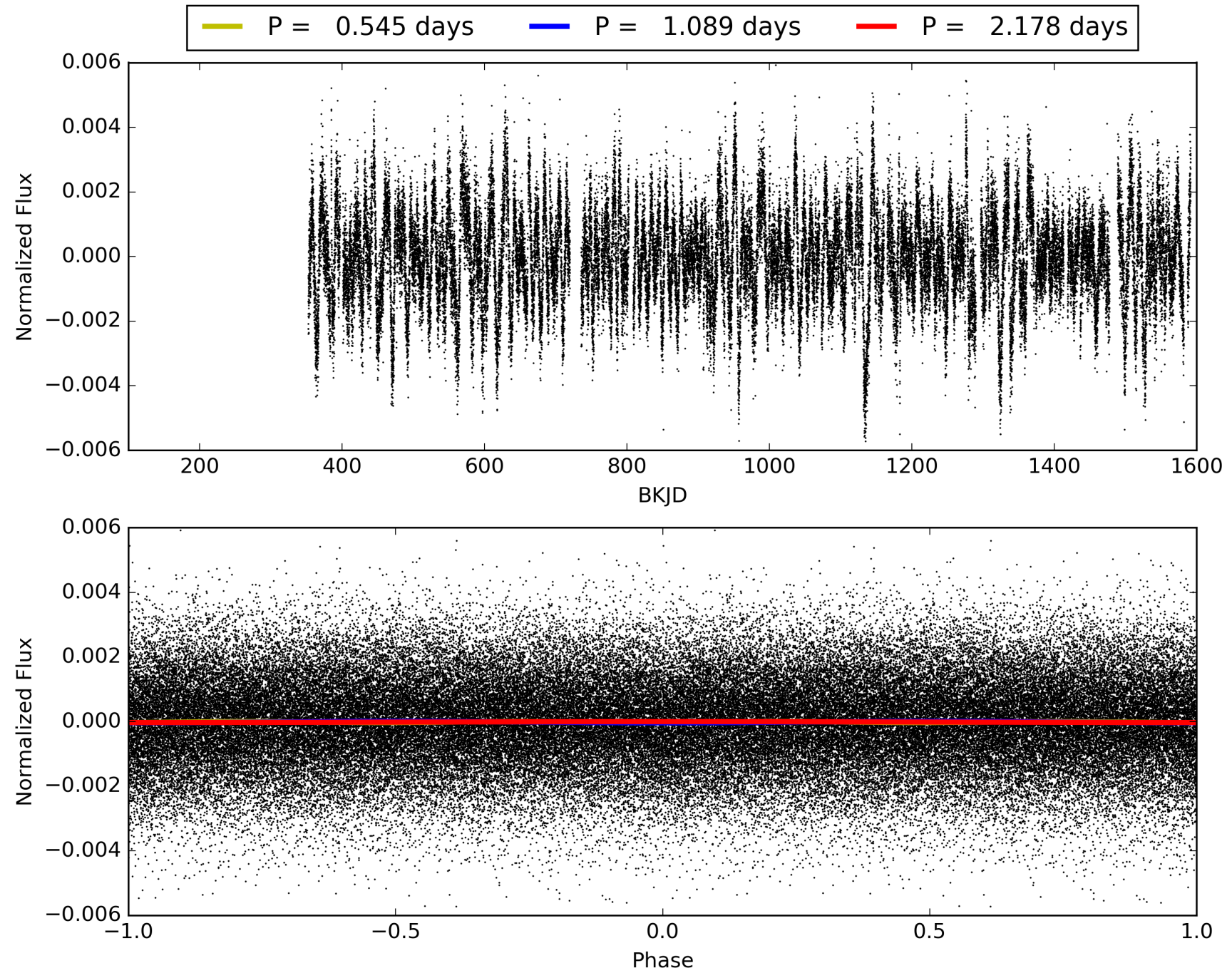
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:26:34 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009579753-01, PDC Light Curves

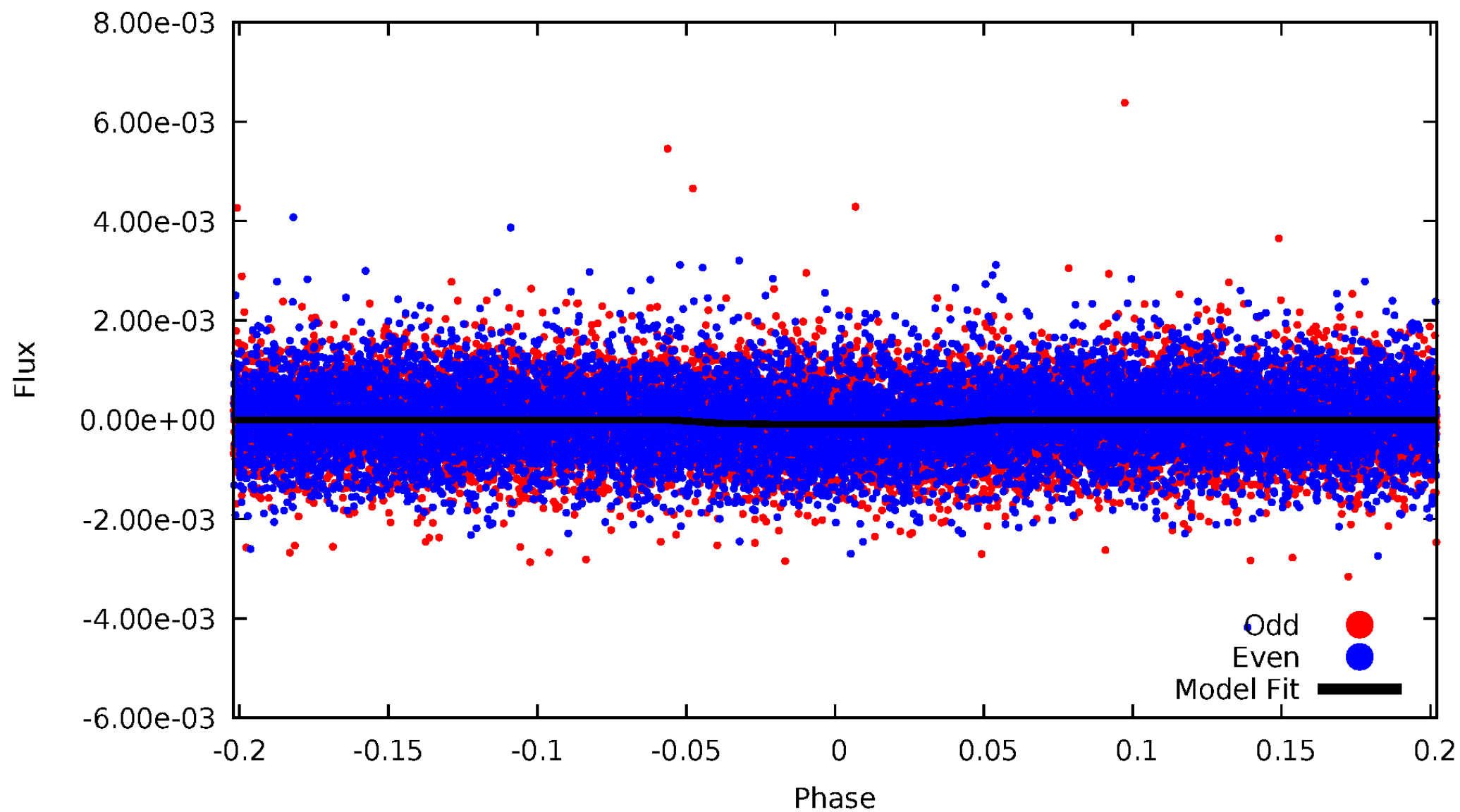


TCE 009579753-01



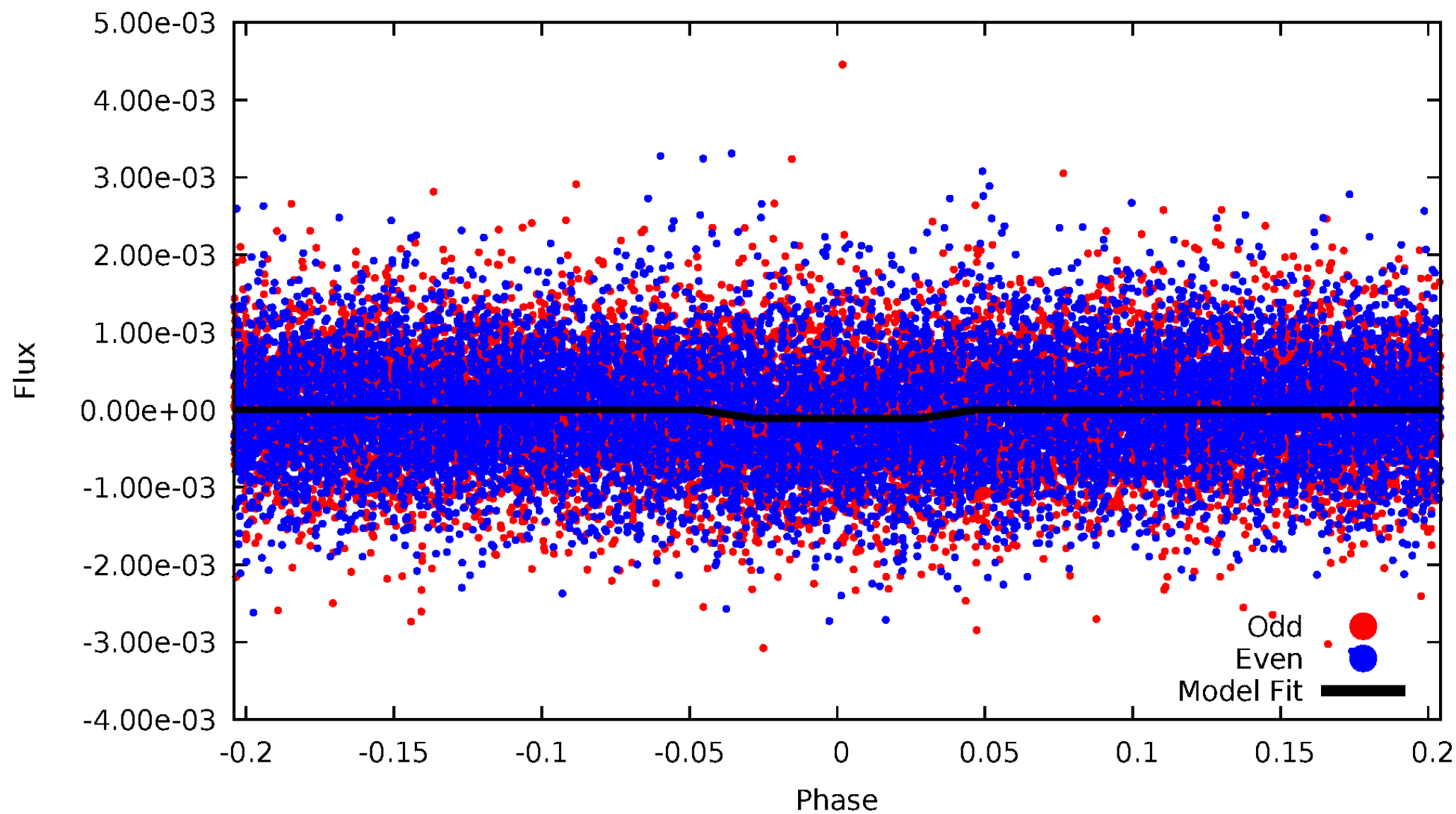
DV Odd/Even

TCE 009579753-01



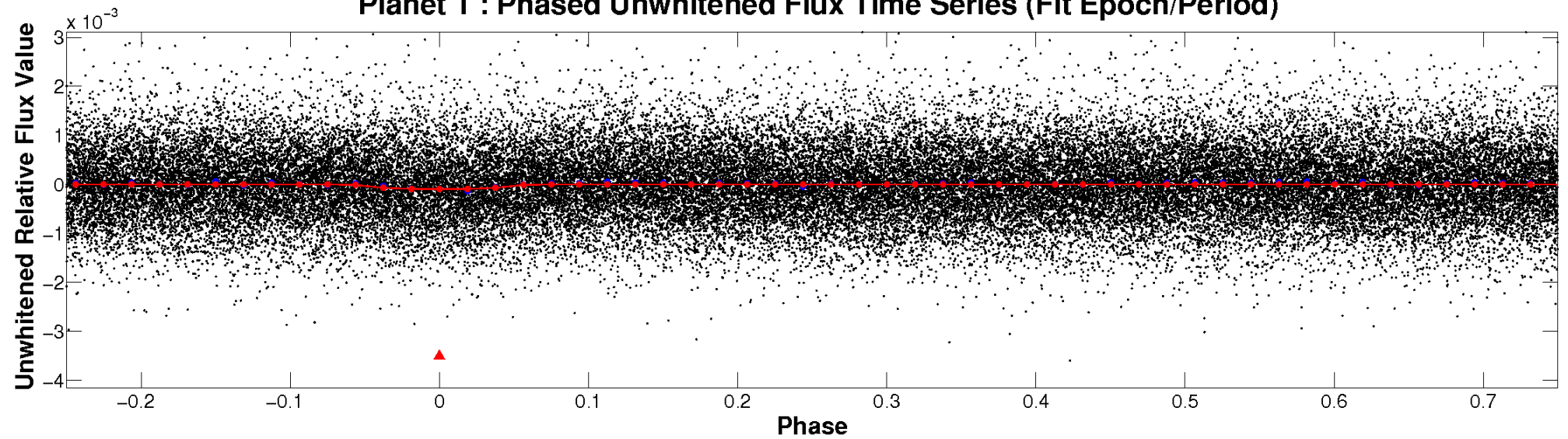
ALT Odd/Even

TCE 009579753-01

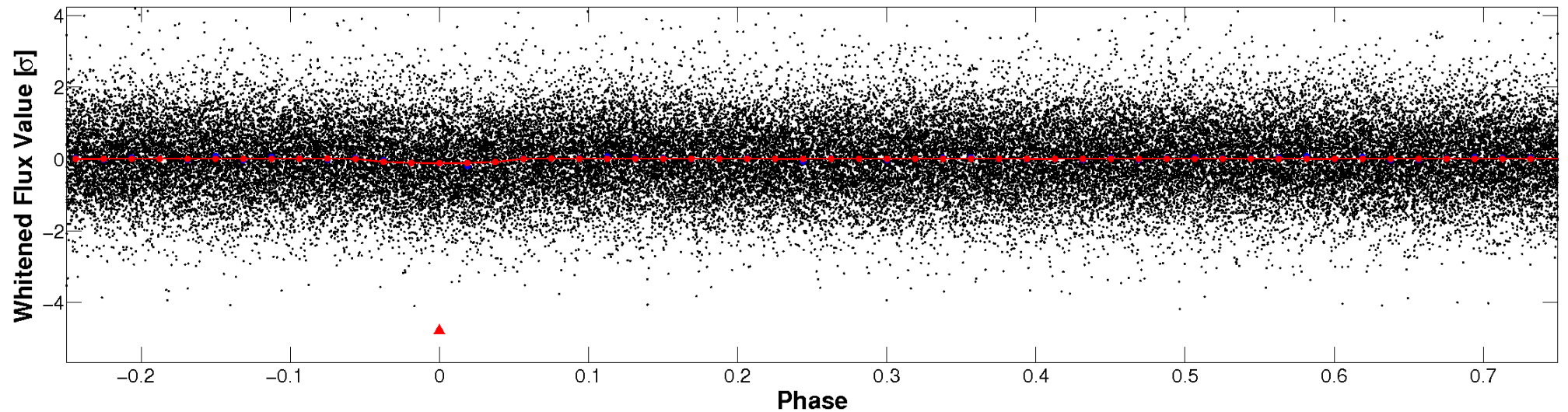


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

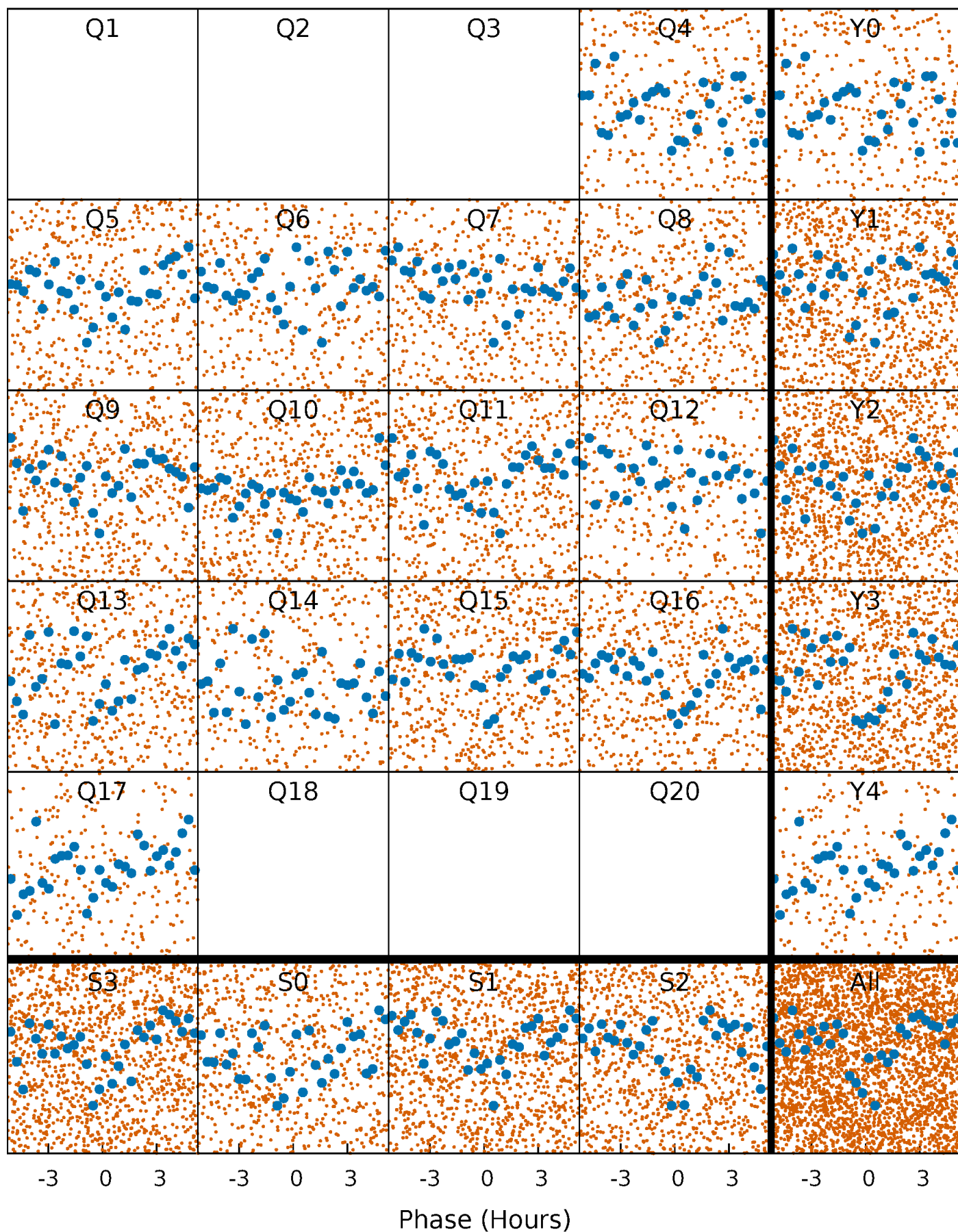


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



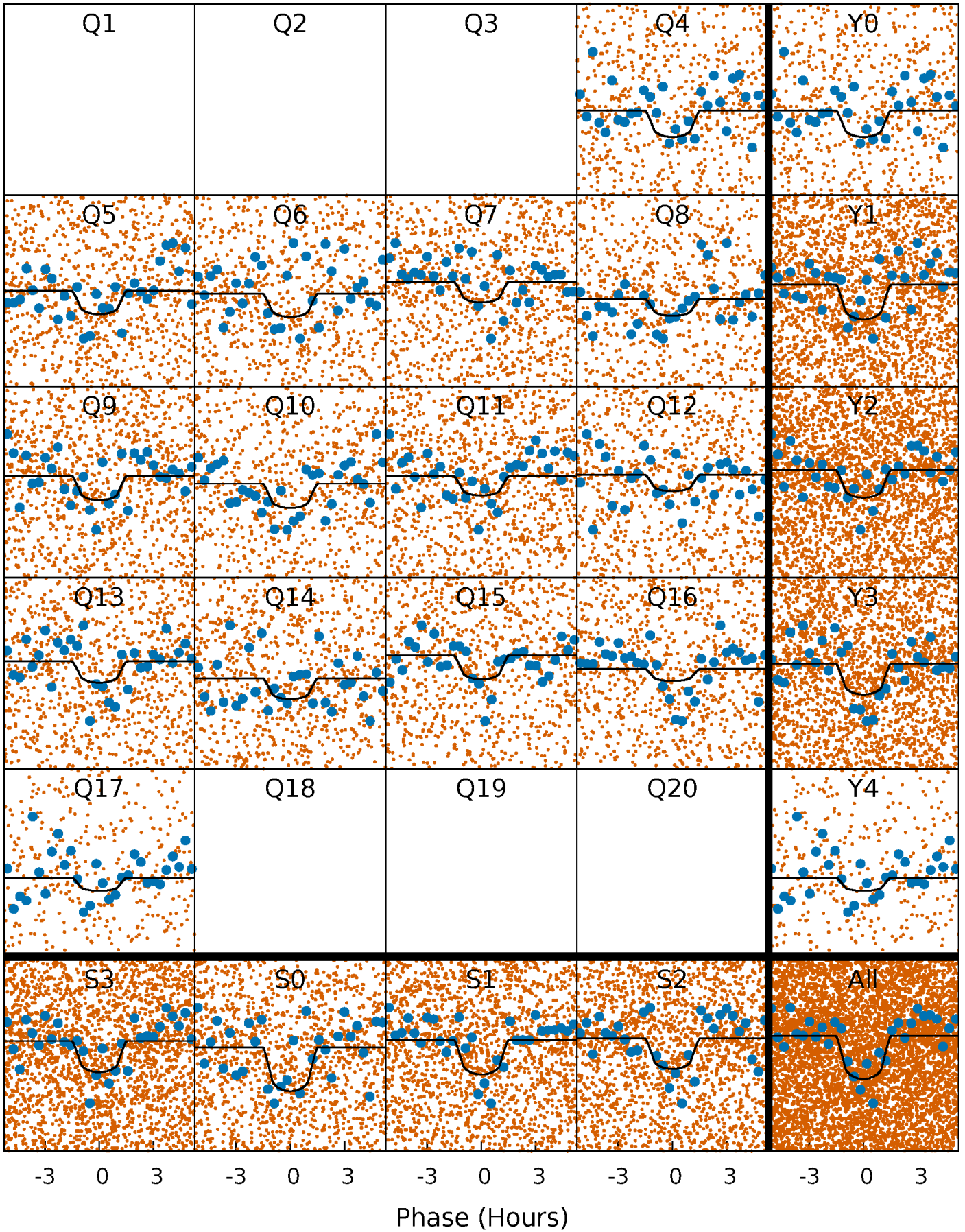
PDC Quarter-Phased Transit Curves

TCE 009579753-01 P= 1.089079 Days $T_0=132.015159$ (BKJD)



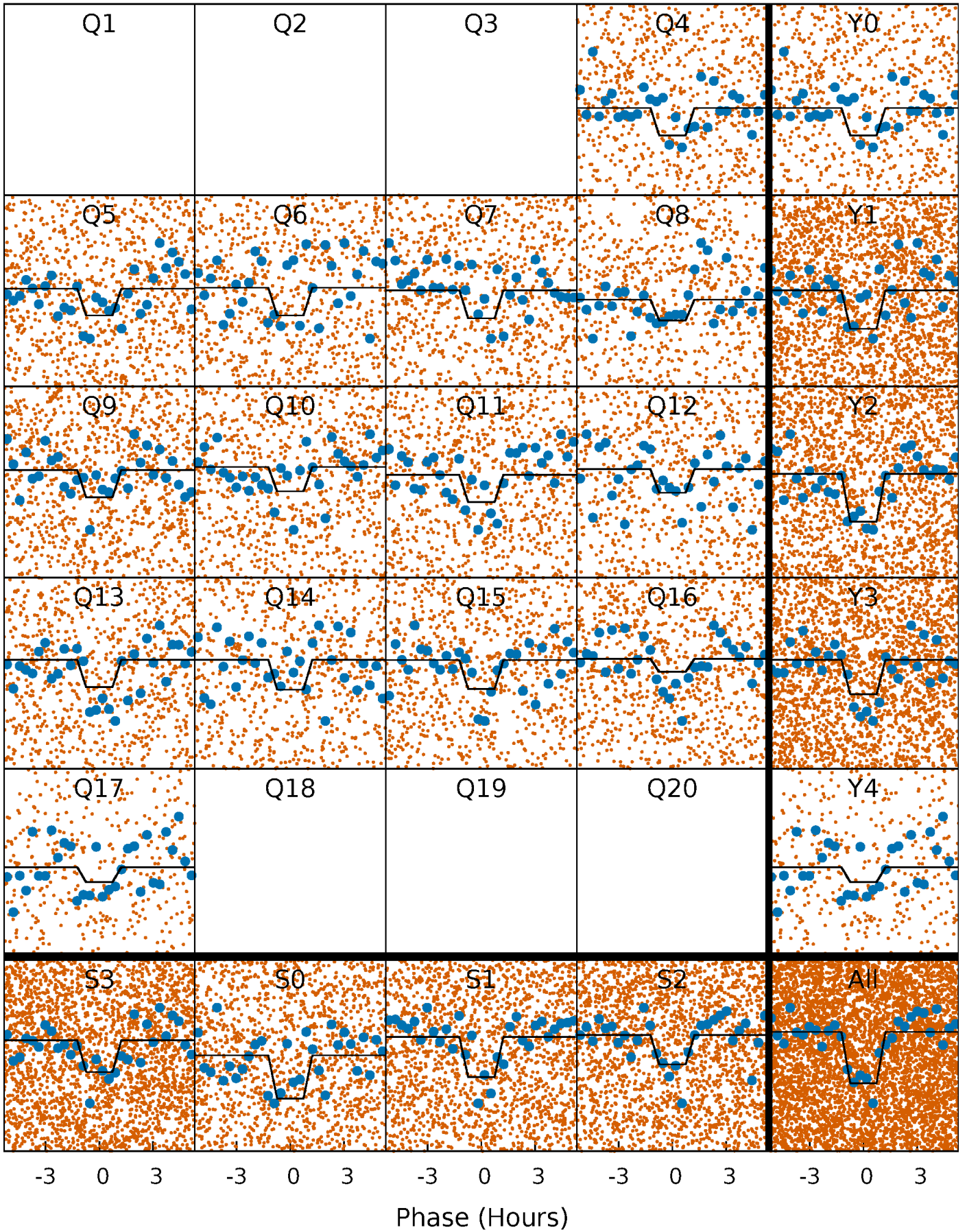
DV Quarter-Phased Transit Curves

TCE 009579753-01 P= 1.089079 Days $T_0=132.015159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

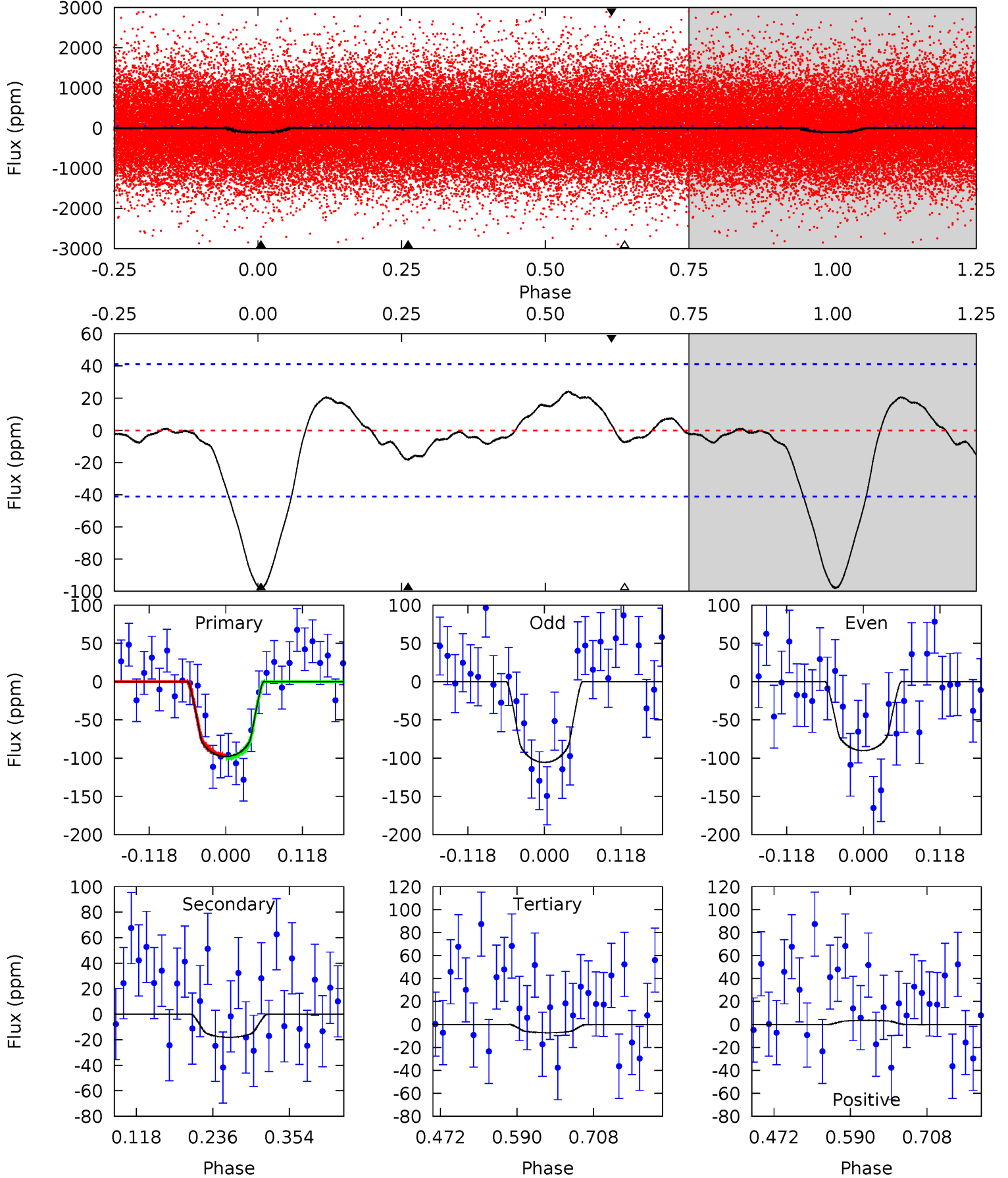
TCE 009579753-01 P= 1.089086 Days $T_0=132.014355$ (BKJD)



DV Model-Shift Uniqueness Test

009579753-01, P = 1.089079 Days, E = 132.015159 Days

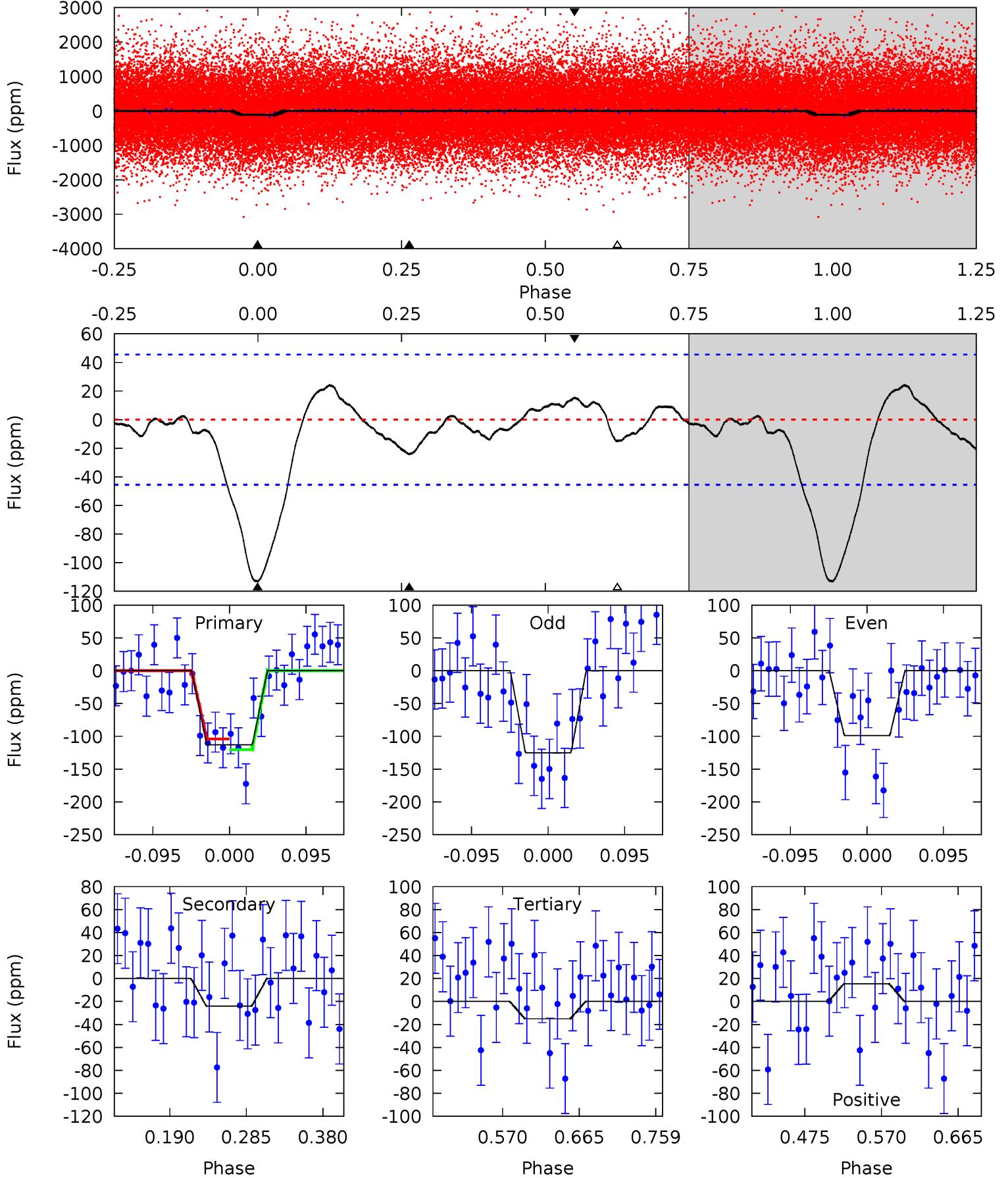
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	1.99	0.80	0.38	4.53	1.56	1.06	9.98	10.4	1.19	1.61	0.85	1.00	0.20	0.22



Alt Model-Shift Uniqueness Test

009579753-01, P = 1.089086 Days, E = 132.014355 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	2.42	1.51	1.54	4.58	1.67	0.98	9.85	9.83	0.91	0.88	1.32	0.95	0.18	0.81



Stellar Parameters For KIC 009579753

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4327^{+152}_{-167}	$4.639^{+0.060}_{-0.024}$	$-0.300^{+0.300}_{-0.300}$	$0.614^{+0.044}_{-0.067}$	$0.600^{+0.066}_{-0.055}$	$3.652^{+0.994}_{-0.444}$
	+4%/-4%	+1%/-1%	+100%/-100%	+7%/-11%	+11%/-9%	+27%/-12%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009579753-01 / KOI 7945.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 9	$0.91^{+0.65}_{-0.53}$	1569^{+63}_{-63}	2898^{+877}_{-552}	$3.522^{+15.525}_{-2.606}$
Alt.	-24 ± 10	$0.88^{+0.75}_{-0.56}$	1567^{+65}_{-68}	3048^{+1259}_{-551}	$4.734^{+35.579}_{-3.446}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

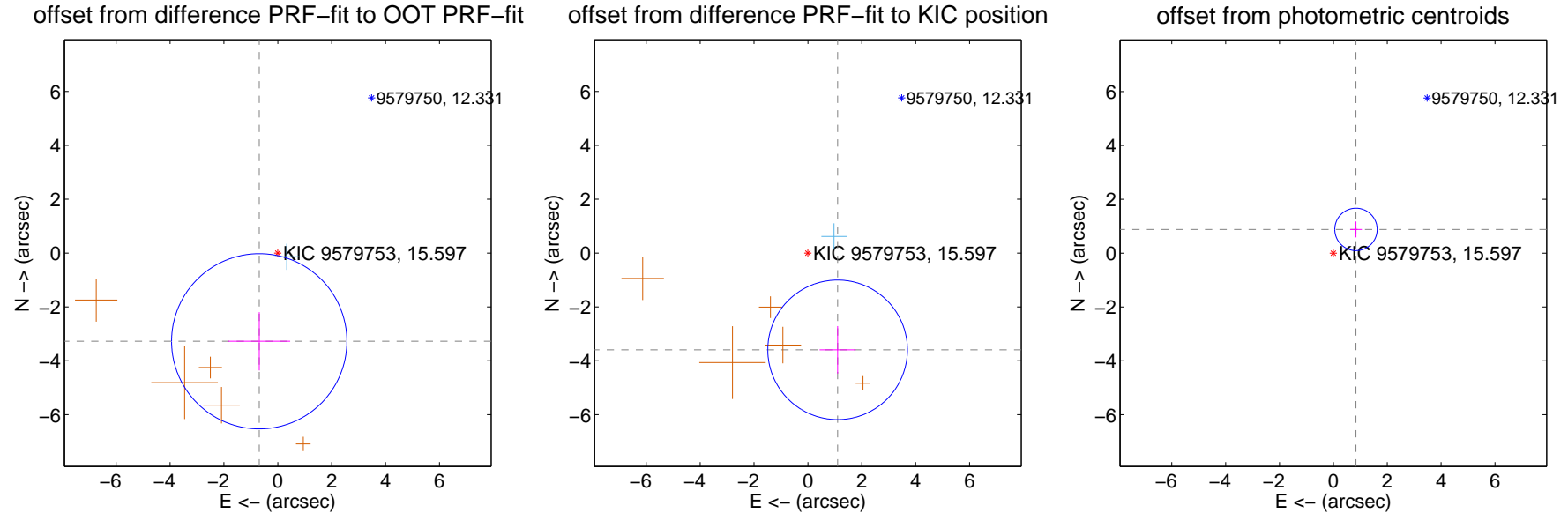
DV Centroid Data

Supplemental centroid analysis for 009579753-01. Kepler magnitude: 15.60. Transit SNR 7.10

There are 1 quarters with good PRF difference image offsets

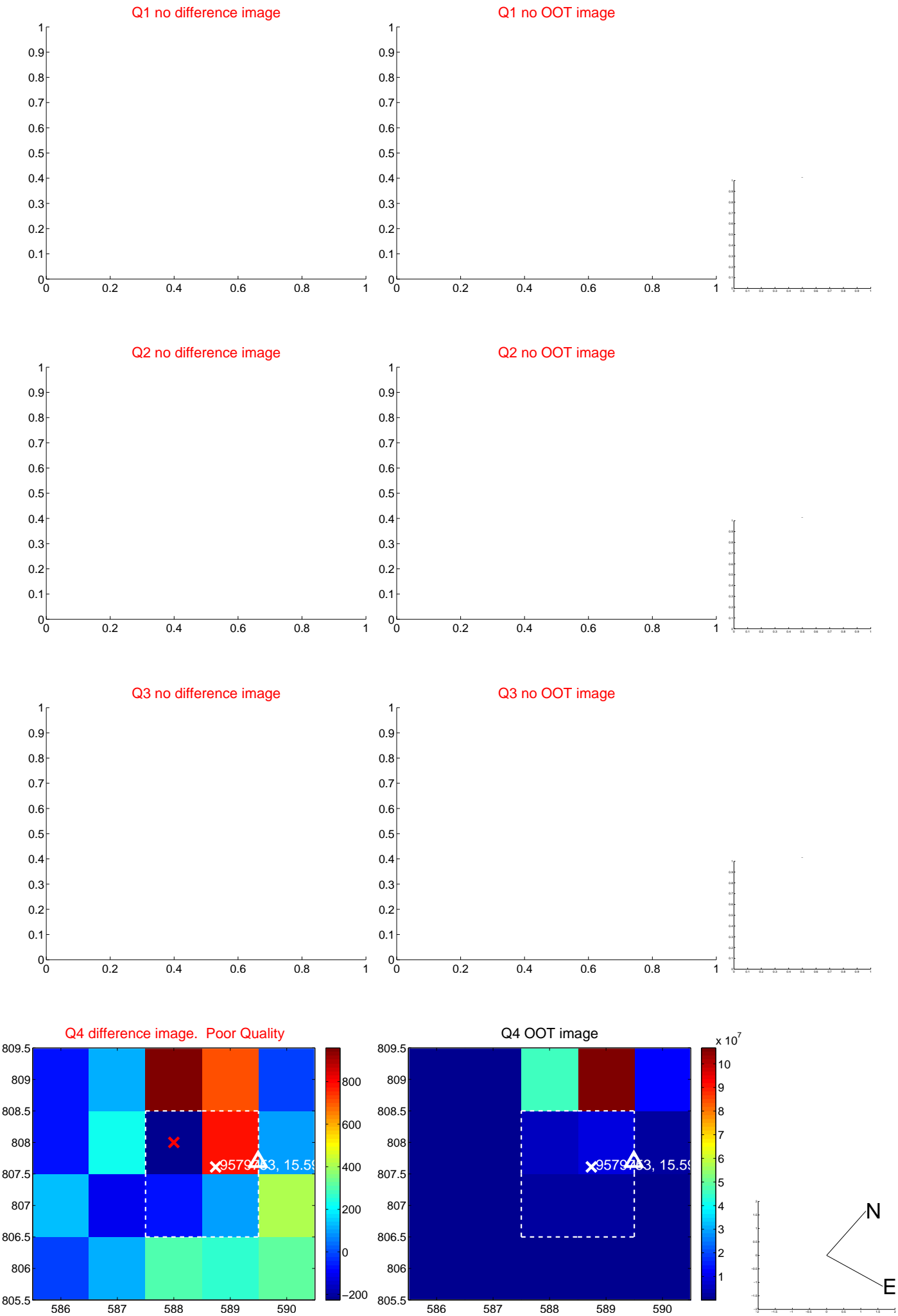
The OOT PRF centroid is offset from the target star catalog position by about 2.51 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.349 ± 1.085	3.09	0.689 ± 1.147	-3.277 ± 1.082
PRF-fit source offset from KIC position	3.759 ± 0.864	4.35	-1.103 ± 0.670	-3.594 ± 0.880
photometric centroid source offset	1.22 ± 0.26	4.64	-0.84 ± 0.22	0.88 ± 0.30

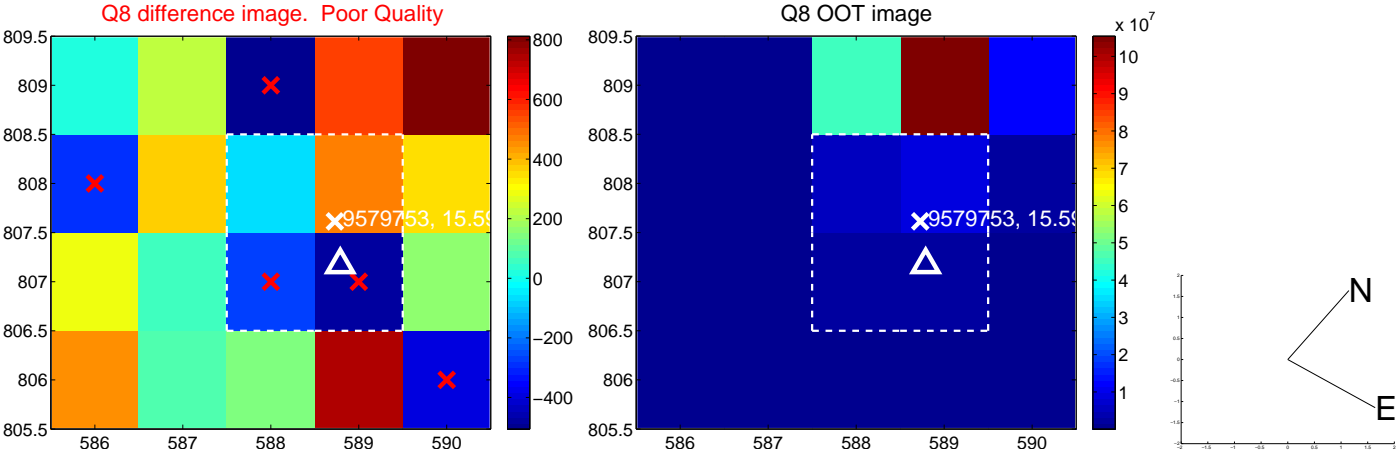
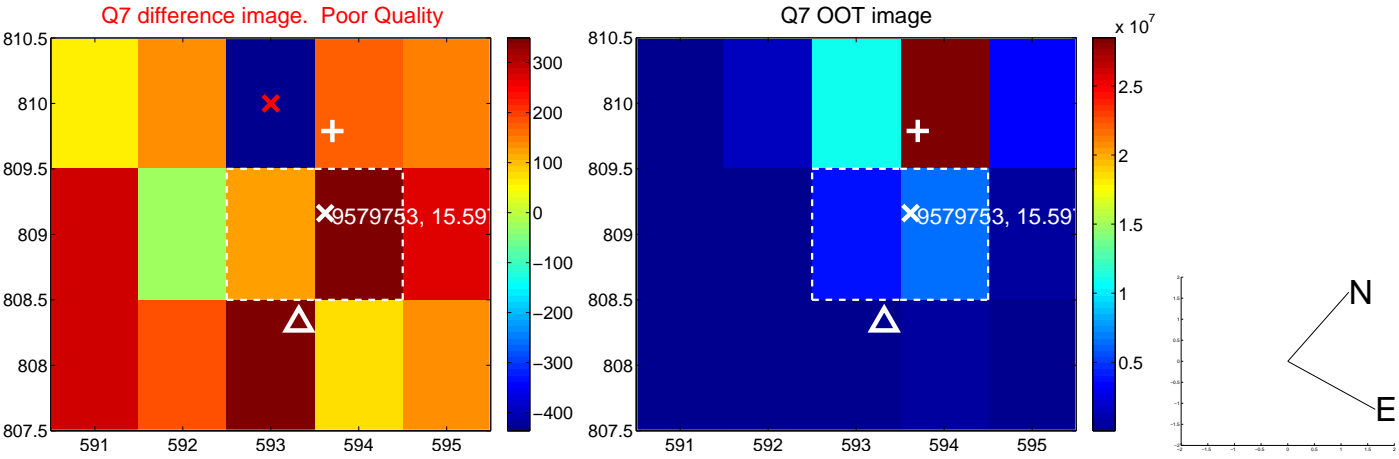
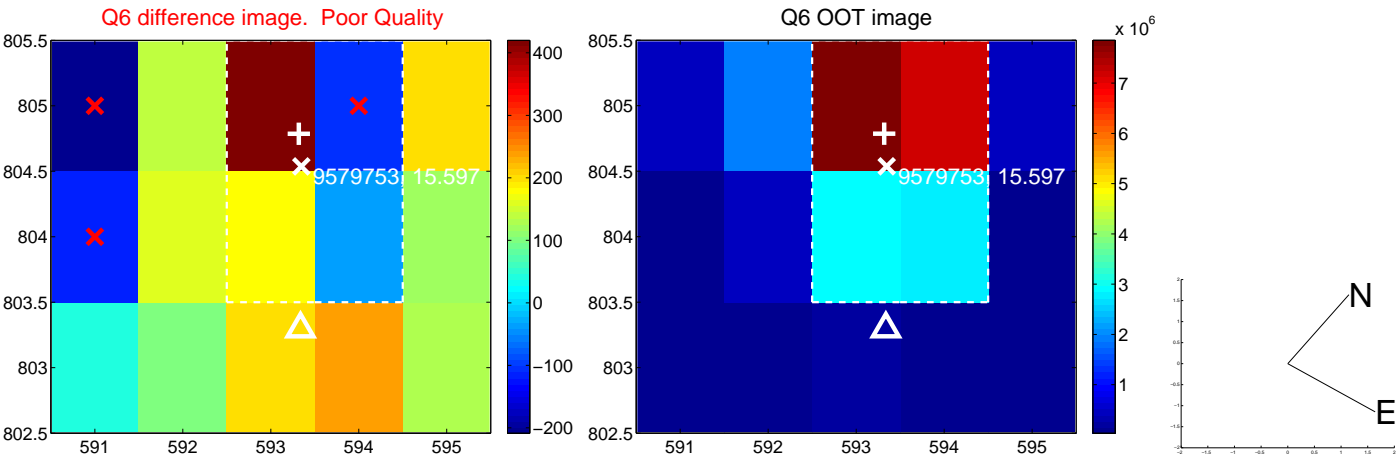
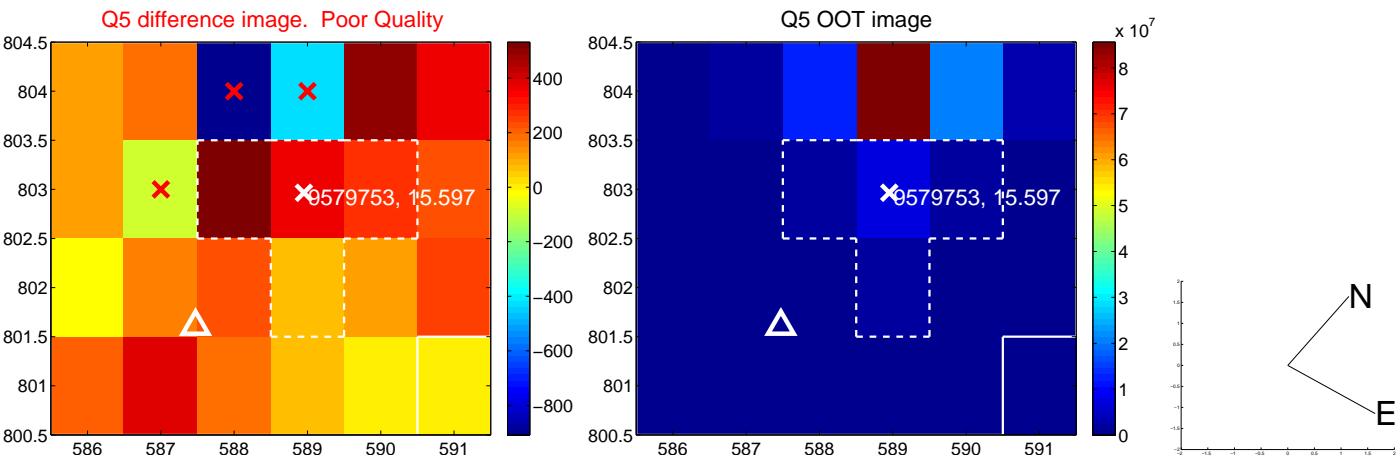


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

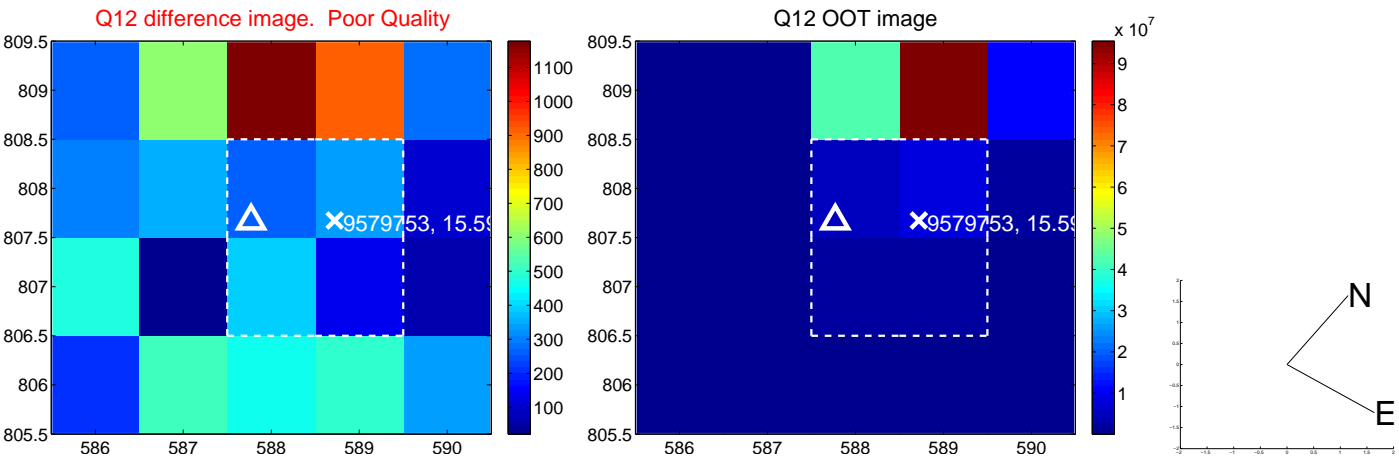
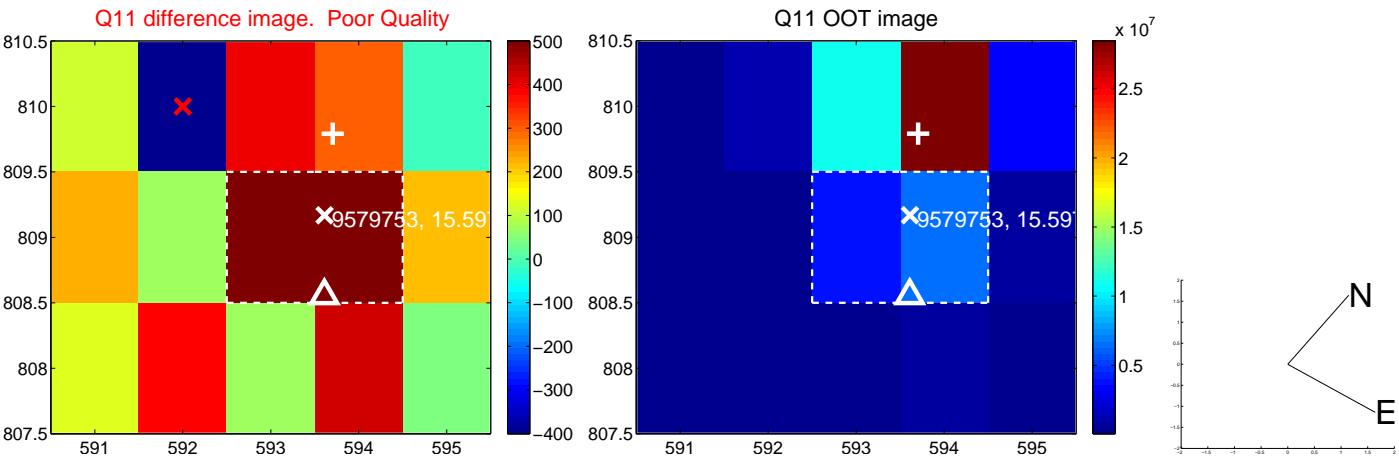
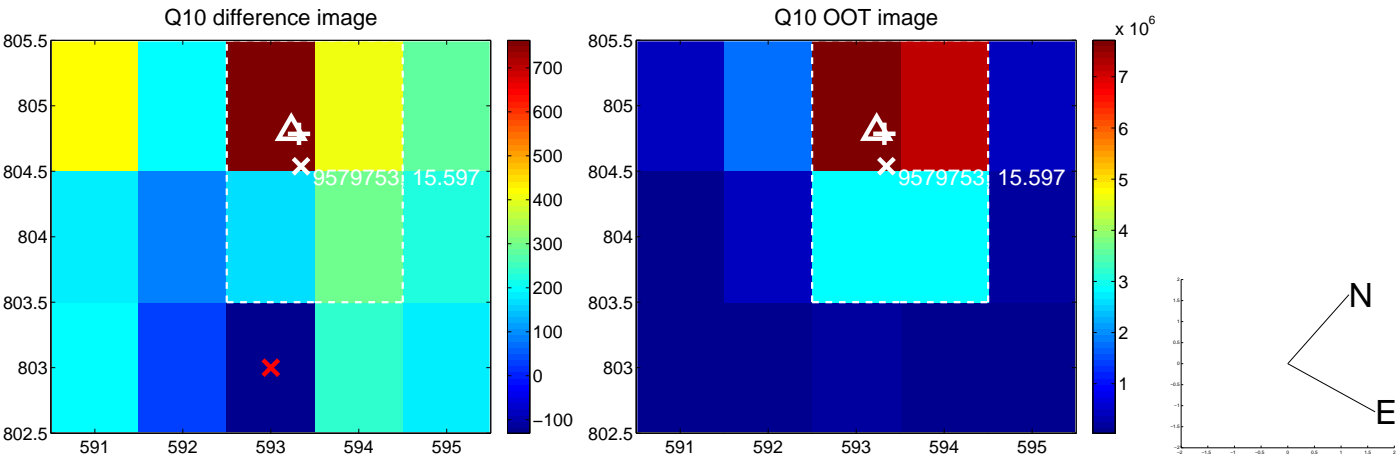
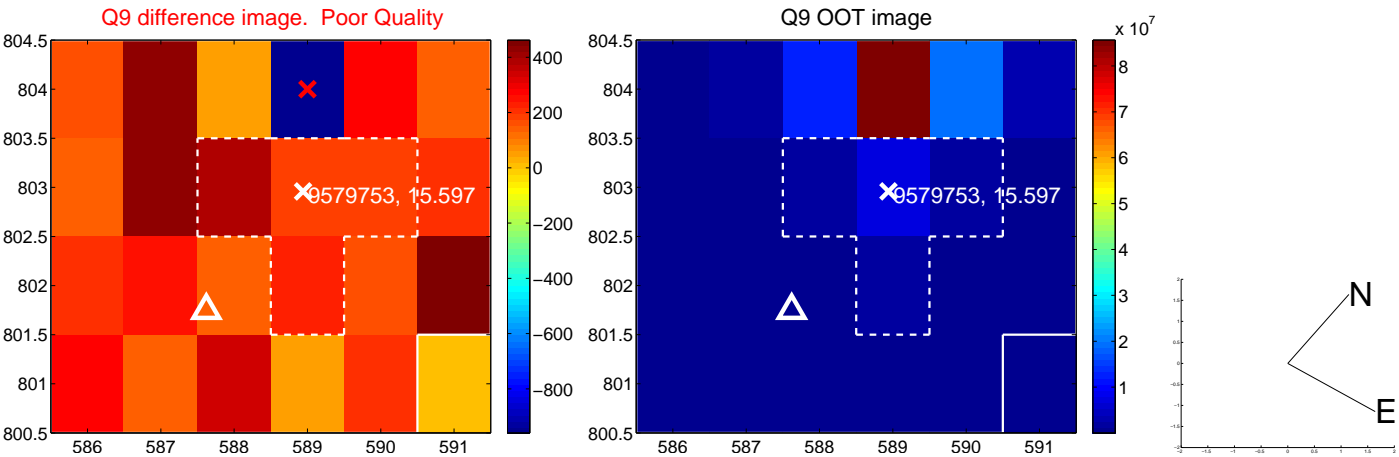
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



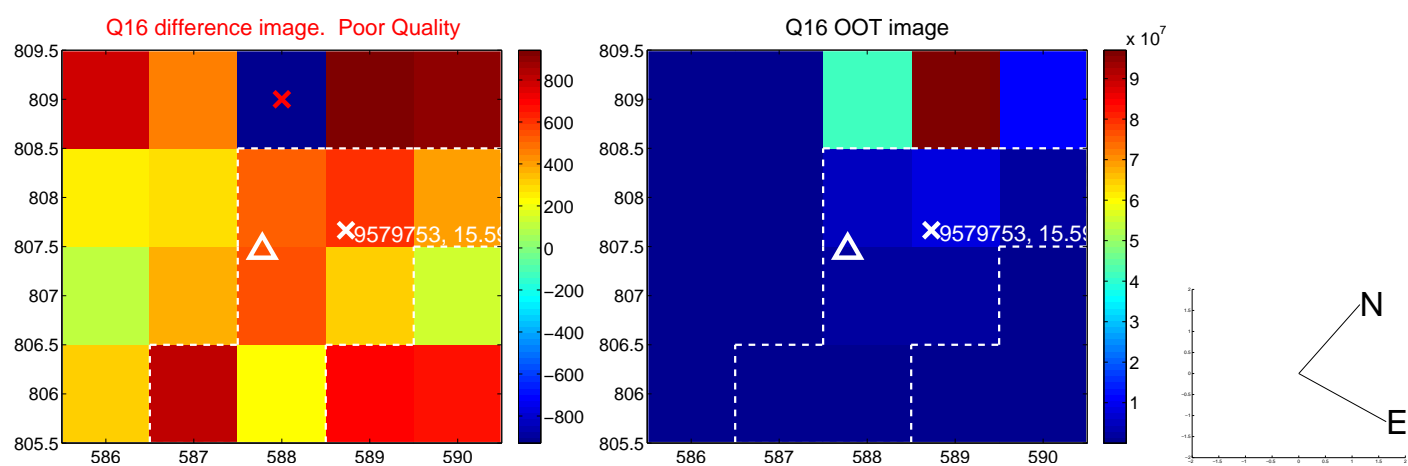
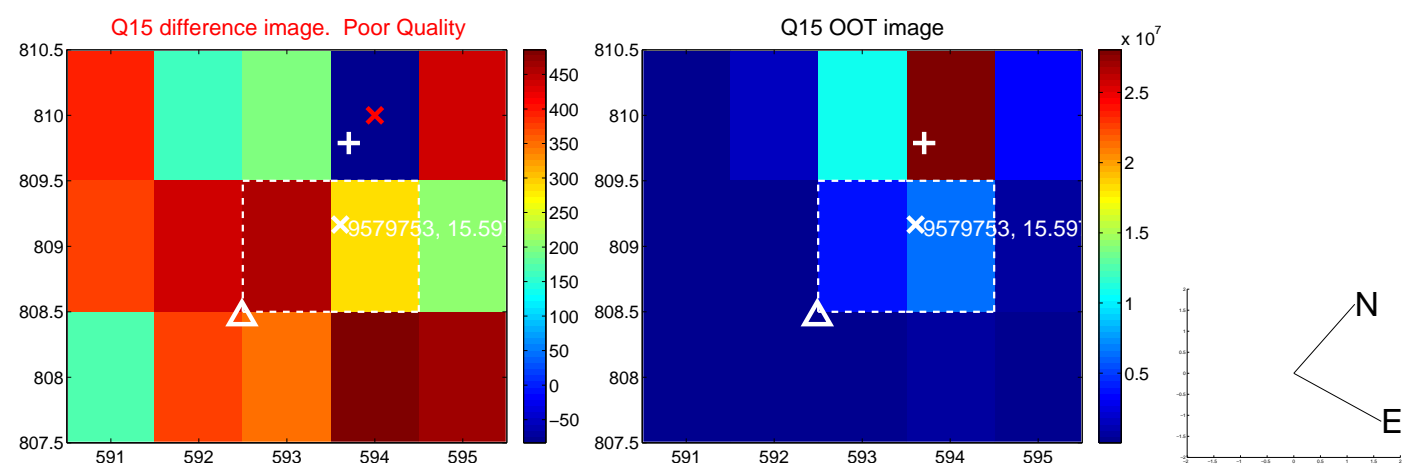
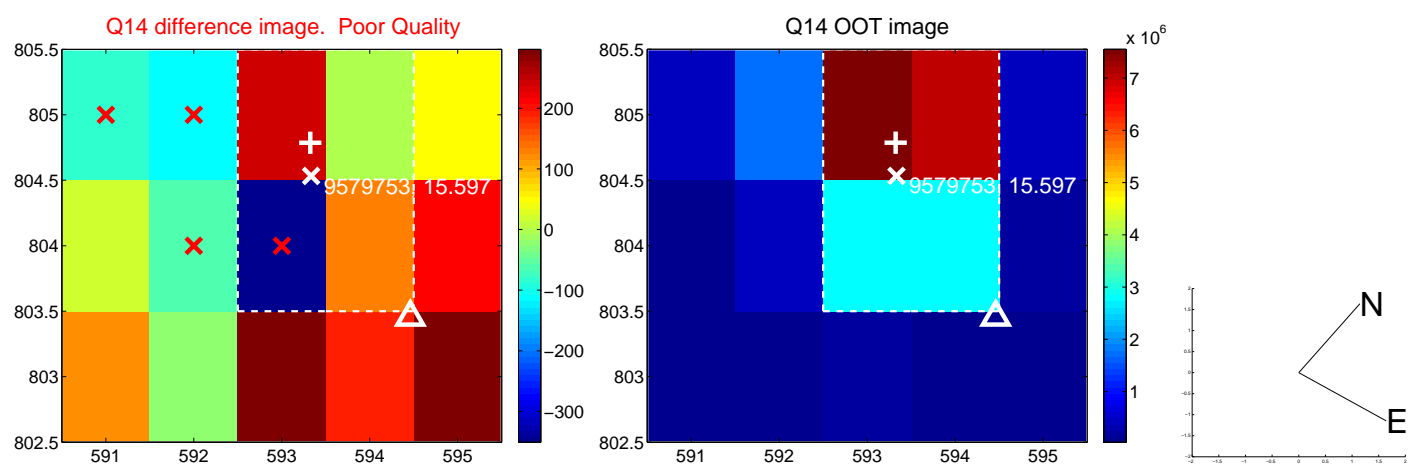
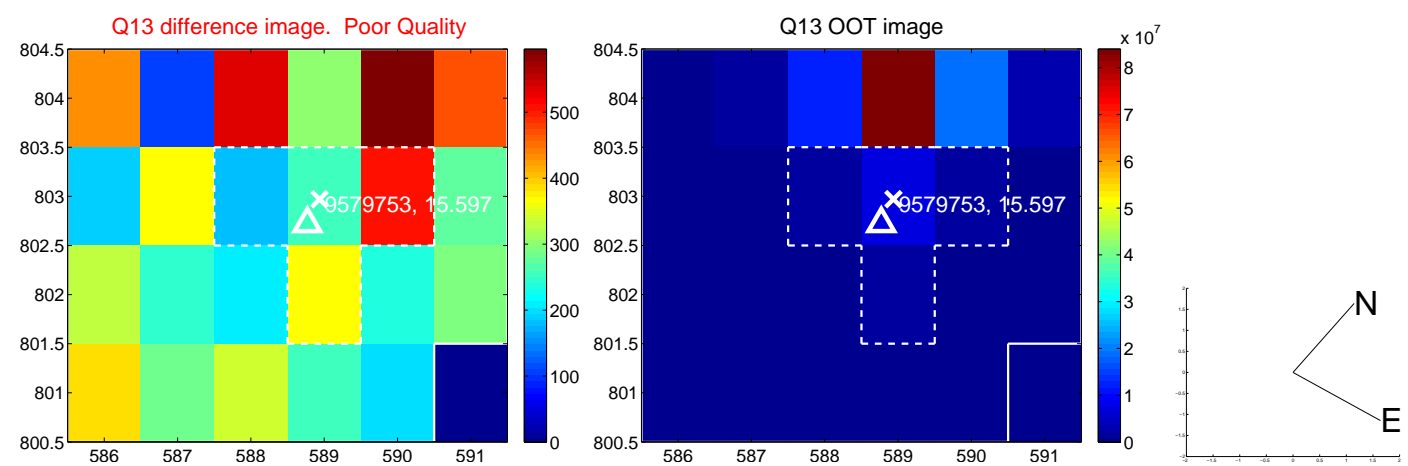
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



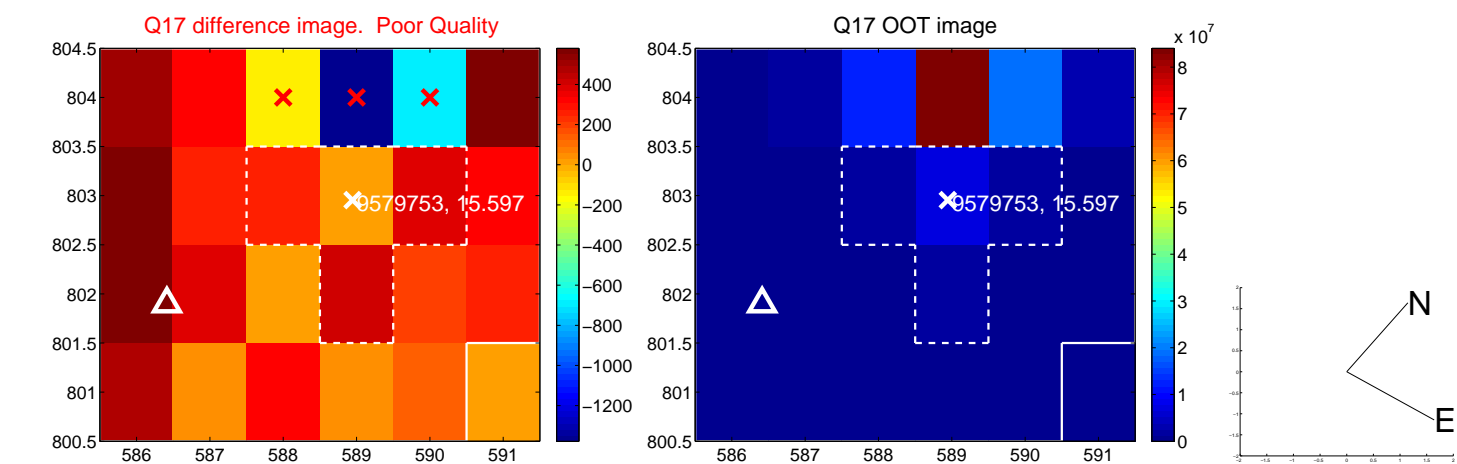
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



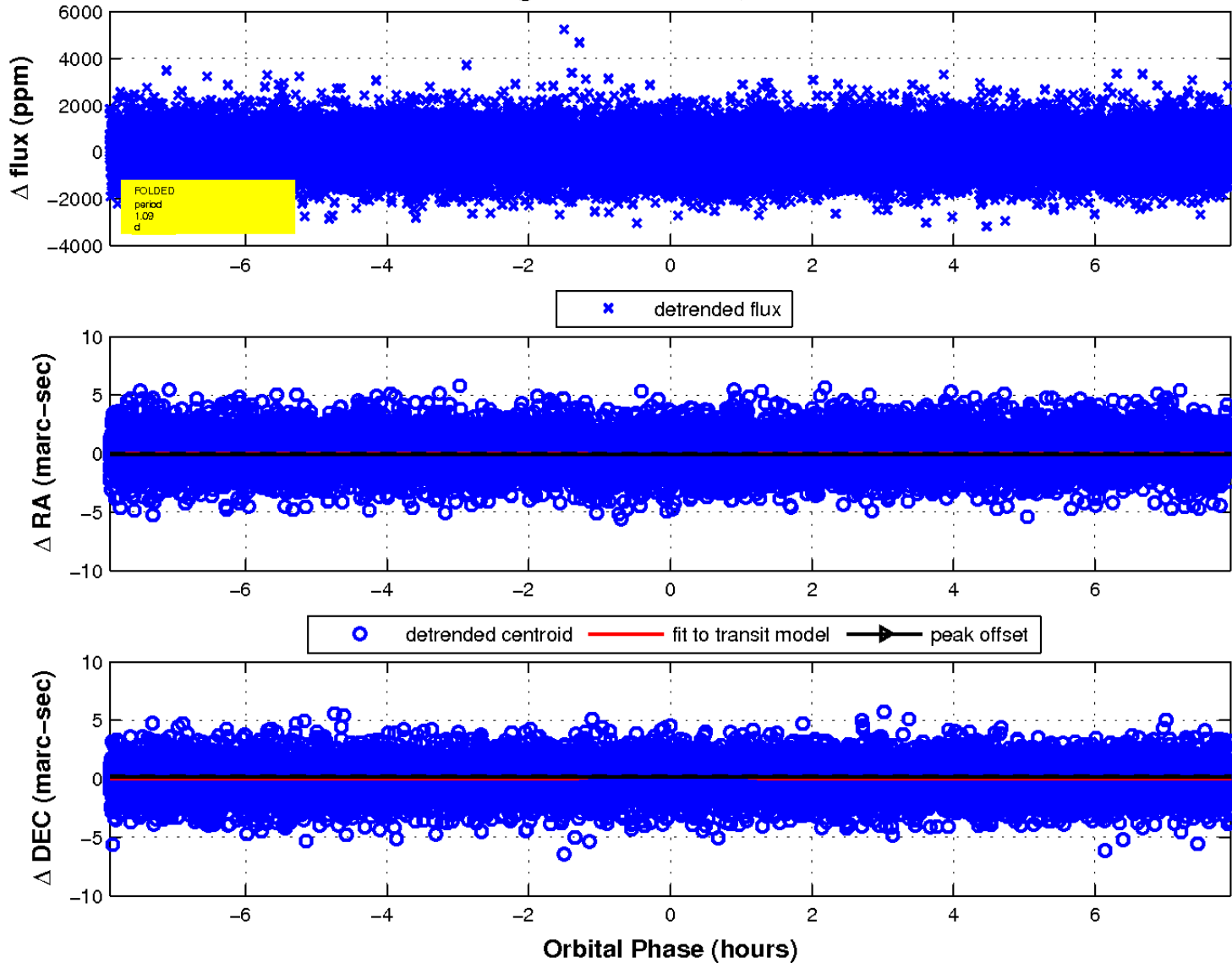
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

